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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,028	07/16/2003	Stephen G. Evangelides JR.	9005/9	1173
27774	7590	12/02/2004	EXAMINER	
MAYER, FORTKORT & WILLIAMS, PC 251 NORTH AVENUE WEST 2ND FLOOR WESTFIELD, NJ 07090			LI, SHI K	
			ART UNIT	PAPER NUMBER
			2633	

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,028

Applicant(s)

EVANGELIDES ET AL.

Examiner

Shi K. Li

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2003 and 11 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11 March 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-11 and 23-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "In an optical transmission system having an optical transmission terminal with first and second optical interfaces, ..., an optical transmission span comprising". It is unclear whether the claim claims an optical transmission system or an optical transmission span. Each of claims 2-7, 9 and 11 recites "In the optical transmission system of claim 1, an optical transmission span wherein". It is unclear whether these claims claim an optical transmission system or an optical transmission span.

Claim 23 claims an optical interface device. Claim 23 recites the limitation "comprising: ...; an optical transmission path optically coupled to the fourth optical interface". It is unclear whether the optical transmission path is part of the optical interface device or not.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 6-8, 11-12, 17-19, 22-23, 28-30 and 33-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Way (U.S. Patent Application Pub. 2002/0021464).

Regarding claims 1, 12, 23 and 34, Way discloses in FIG. 1 an optical transmission system comprising a plurality of transponders 24, a WDM multiplexer 26, amplifiers 52 and optical transmission fiber 16. The transponders define a first interface for connecting with optical transmitter 20 and a second interface for connecting with WDM multiplexer 26. The WDM multiplexer 26 and amplifier 52 define a third interface for communicating with the second interface and a fourth interface for communicating with next span or receiver. WDM multiplexer and amplifier 52 (signal processing unit of instant claim) transform optical signals between the second and fourth interfaces, i.e., the first and second optical layer transport protocols.

Regarding claims 6, 17 and 28, Way teaches WDM multiplexer 26 for generating WDM signal 30. Amplifier 52 amplifies and outputs a WDM signal.

Regarding claims 7-8, 11, 18-19, 22, 29-30 and 33, Way teaches an optical gain element (amplifier) 52.

5. Claims 1-2, 5-8, 11-13, 16-19, 22-24, 27-30 and 33-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Kasahara (U.S. Patent Application Pub. 2002/0131115 A1).

Regarding claims 1, 12, 23 and 34, Kasahara discloses in FIG. 1 an optical transmission system comprising a plurality of transmission/reception devices 21, 22, ..., 2N, a WDM multiplexer/demultiplexer 2a, optical amplifier 2b (signal processing unit) and transmission path

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3. The transmission/reception devices define first optical interface to the transmission devices 11, 12, 1N, and second optical interface to WDM multiplexer/demultiplexer. The WDM multiplexer/demultiplexer and amplifier define third optical interface connecting to the second optical interface, and fourth optical interface to the transmission path.

Regarding claims 2, 13 and 24, Kasahara teaches in FIG. 1 bi-directional interfaces.

Regarding claims 5, 16 and 27, Kasahara teaches in paragraph [0018] that the transmission/reception devices interface with Gigabit Ethernet.

Regarding claims 6, 17 and 28, Kasahara teaches in FIG. 1 WDM signal for transmission.

Regarding claims 7-8, 11, 18-19, 22, 29-30 and 33, Kasahara teaches in FIG. 1 an optical gain element (amplifier) 2b.

6. Claims 1-4, 6-8, 11-15, 17-19, 22, 25-26, 28-30 and 33-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Yin et al. (U.S. Patent Application Pub. 2002/0008913 A1).

Regarding claims 1, 12 and 34, Yin et al. teaches in FIG. 2 an optical transmission system comprising a transponder 34, an optical amplifier (signal processing unit) 38 and transmission path 26. The transponder defines a first optical interface for connecting with SONET LTE, ATM switch and IP router, and a second interface for connecting to the optical amplifier. The optical amplifier defines a third optical interface for connecting to the transponder and a fourth interface for connecting to the transmission path 26.

Regarding claims 2, 13 and 24, Yin et al. teaches in paragraph [0032] that transceivers 22 and 24 are substantially identical and one direction transmission is shown as an example.

Therefore, Yin et al. teaches bi-directional interfaces.

Regarding claims 3, 14 and 25, Yin et al. teaches in FIG. 2 SONET LTE 32 for connecting to the first optical interface.

Regarding claims 4, 15 and 26, Yin et al. teaches in FIG. 2 ATM switch 30 for connecting to the first optical interface.

Regarding claims 6, 17 and 28, Yin et al. teaches in FIG. 2 WDM signal for transmission.

Regarding claims 7-8, 11, 18-19, 22, 29-30 and 33, Yin et al. teaches in FIG. 2 an optical gain element 38.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 9-11, 20-21 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Way (U.S. Patent Application Pub. 2002/0021464) in view of Trischitta et al. (P. Trischitta et al., "Applying WDM Technology to Undersea Cable Networks", IEEE Communication s Magazine, February 1998).

Way has been discussed above in regard to claims 1, 6-8, 11-12, 17-19, 22-23, 28-30 and 33-34. The difference between Way and the claimed invention is that Way does not teach an undersea optical transmission path. Trischitta et al. teaches to apply long-haul WDM transmission technology to undersea applications and discloses in FIG. 2 the Africa ONE project. One of ordinary skill in the art would have been motivated to combine the teaching of Trischitta et al. with the optical transmission system of Way to apply the transmission path of Way for

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undersea applications because WDM allows undersea networks to use the wavelength layer to add and drop more traffic capacity at more landing points, while keeping the number of fiber pairs in the system to a minimum (see page 63, left col., last paragraph). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use WDM optical transmission network of Way for undersea applications, as taught by Trischitta et al., WDM allows undersea networks to use the wavelength layer to add and drop more traffic capacity at more landing points, while keeping the number of fiber pairs in the system to a minimum.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-33 are provisionally rejected under the judicially created doctrine of double patenting over claims 1-11, 18-28, 35-45 of copending Application No. 10/621,115. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: Claim 1 of copending Application '115 claims an optical transmission system comprising all the limitations of claim 1 of instant application. Claims 2-11 of copending Application '115 have identical or similar additional limitations as claims 2-11 of instant application, respectively. Claim 18 of copending Application '115 claims a method of transmitting an optical signal comprising all limitations of claim 12 of instant application. Claims 19-28 of copending Application '115 have identical or similar additional limitations as claims 12-22 of instant application, respectively. Claim 35 of copending Application '115 claims an optical interface device comprising all limitation of claim 23 of instant application. Claims 36-45 of copending Application '115 have identical or similar additional limitations as claims 24-33 of instant application.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending

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application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

skl
24 October 2004

Hank Phan
Hank Phan
Primary Examiner
11/26/04